

# Resistances for Various Membranes at 80 °C

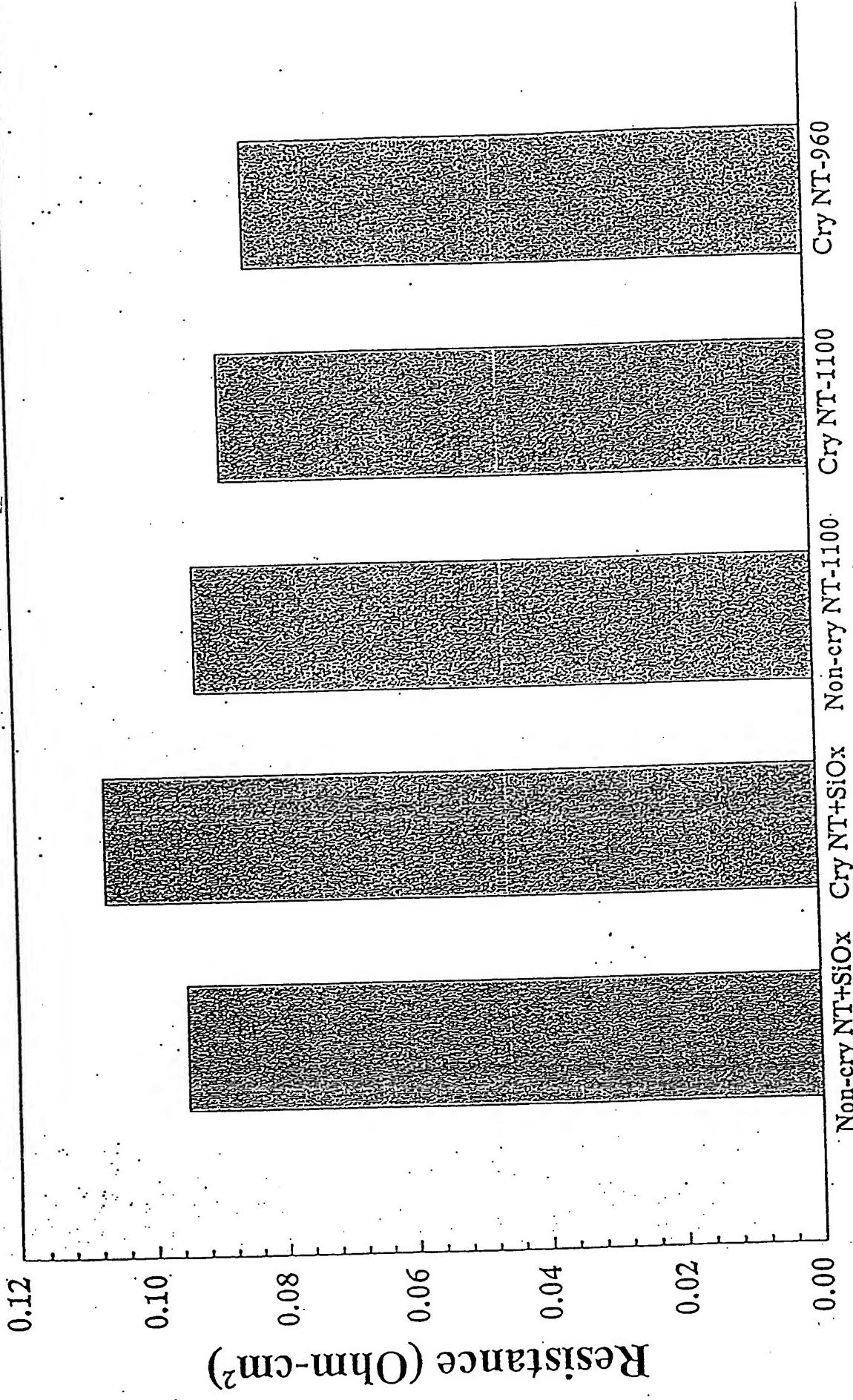


Fig. 1

# Hydrogen Crossover for Various Preparations at 0V

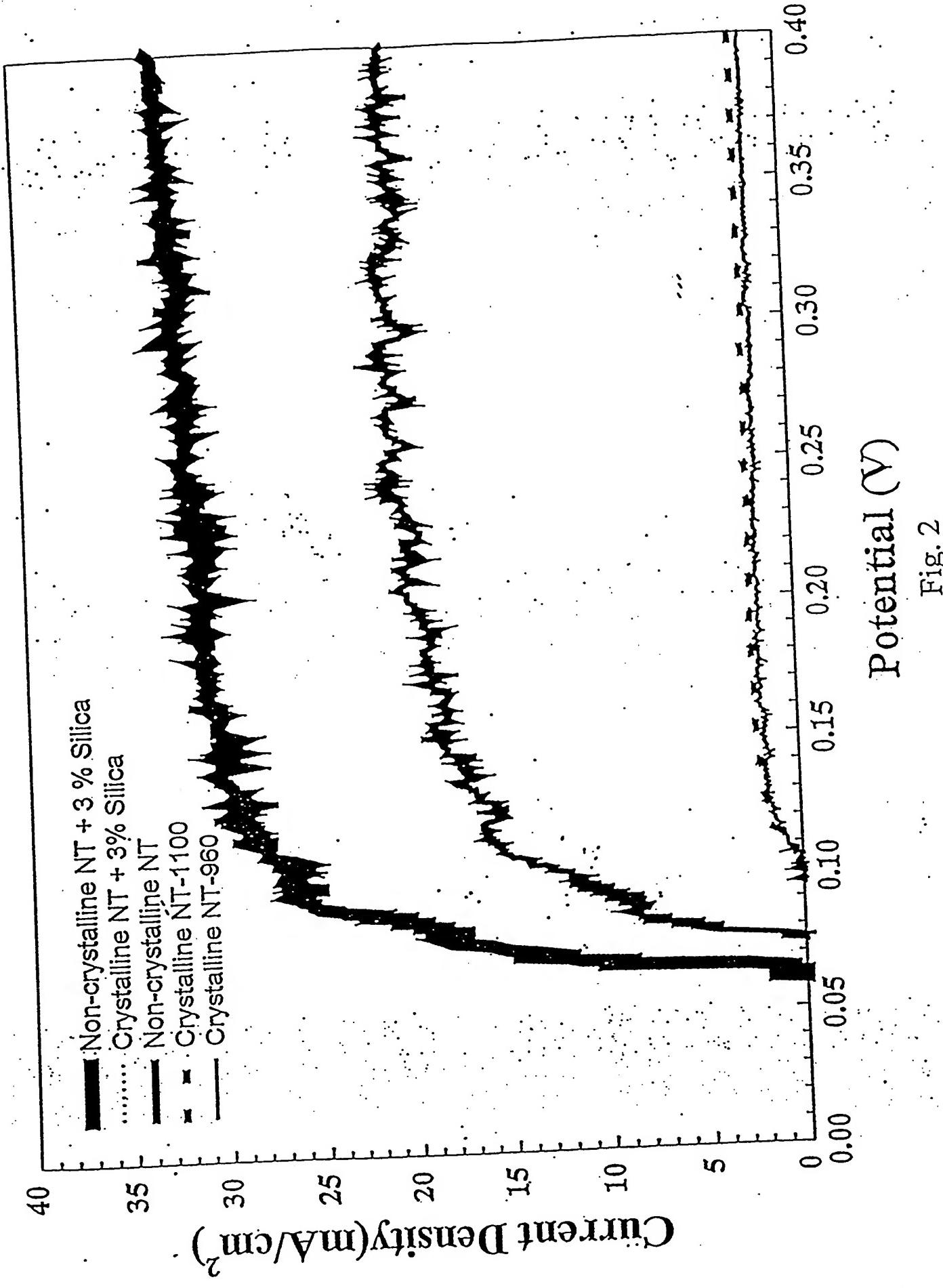
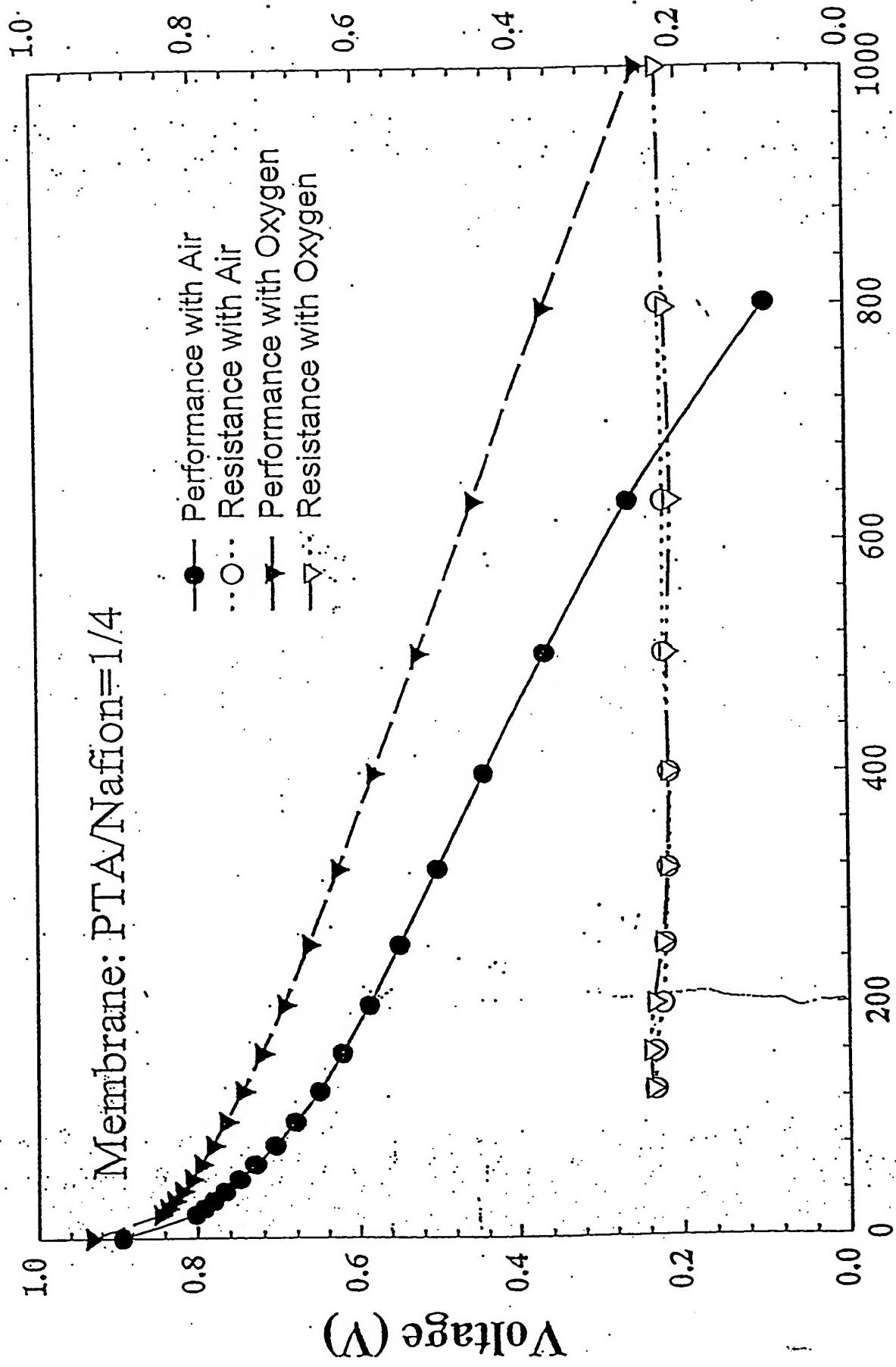


Fig. 2

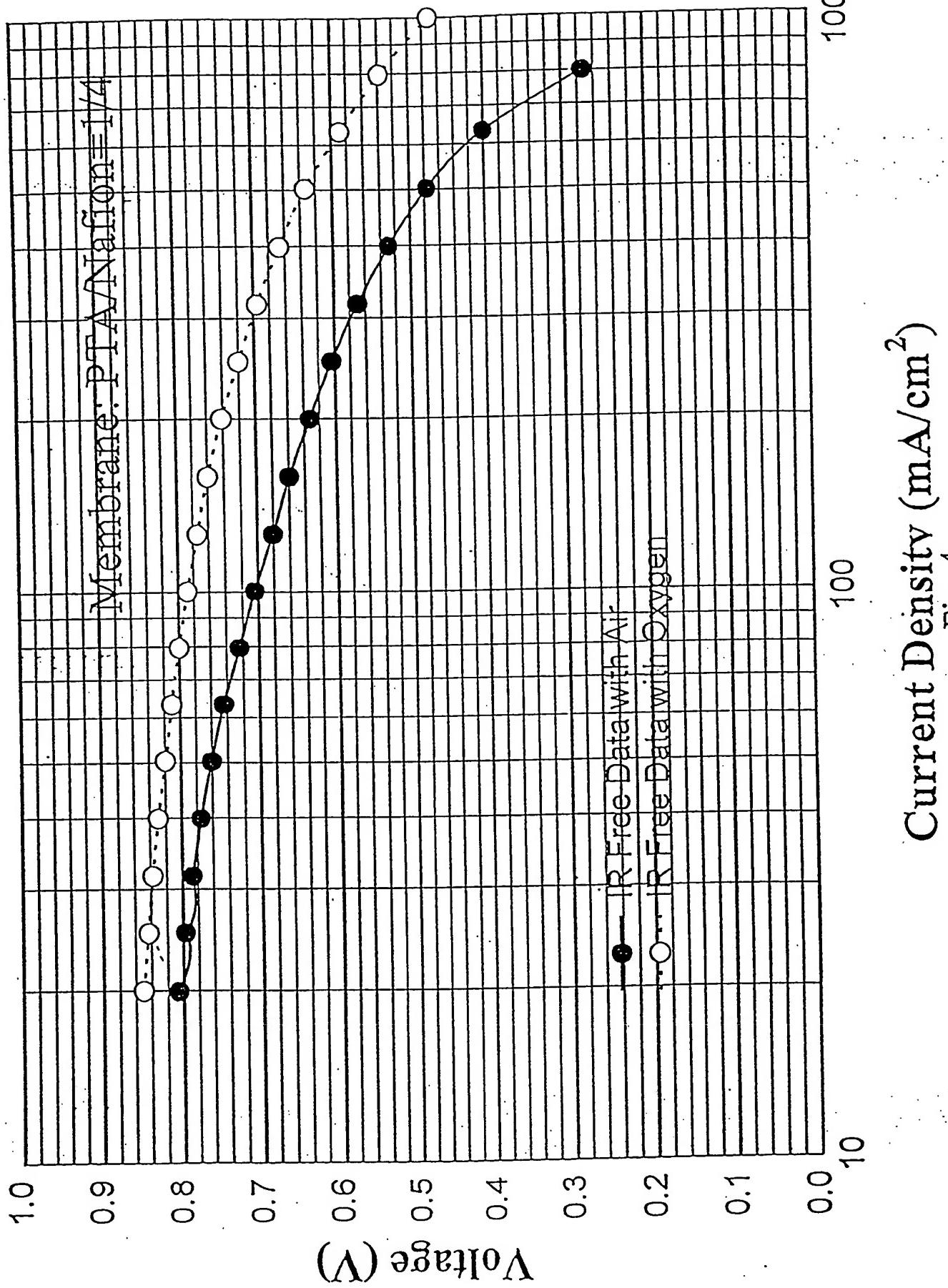
thickness: 0.7 mil; Pt black+ 40% Pt/C; 45% Pt-Ru/C; anode: 3.4 stoich hydrogen at 90 °C; cathode: air or oxygen at 84 °C)



EW960-40-h3  
Current Density ( $\text{mA}/\text{cm}^2$ )

Fig. 3

thickness: 0.7 mil; Pt black+ 40% Pt/C; 45% Pt-Ru/C; anode: 3.4 stoich  
hydrogen at 90 °C; cathode: air or oxygen at 84 °C)



Hydrogen Crossover Current of NTPA MEA at 110 °C  
(anode humidifier temp:90 °C; cathode humidifier temp: 84 °C)

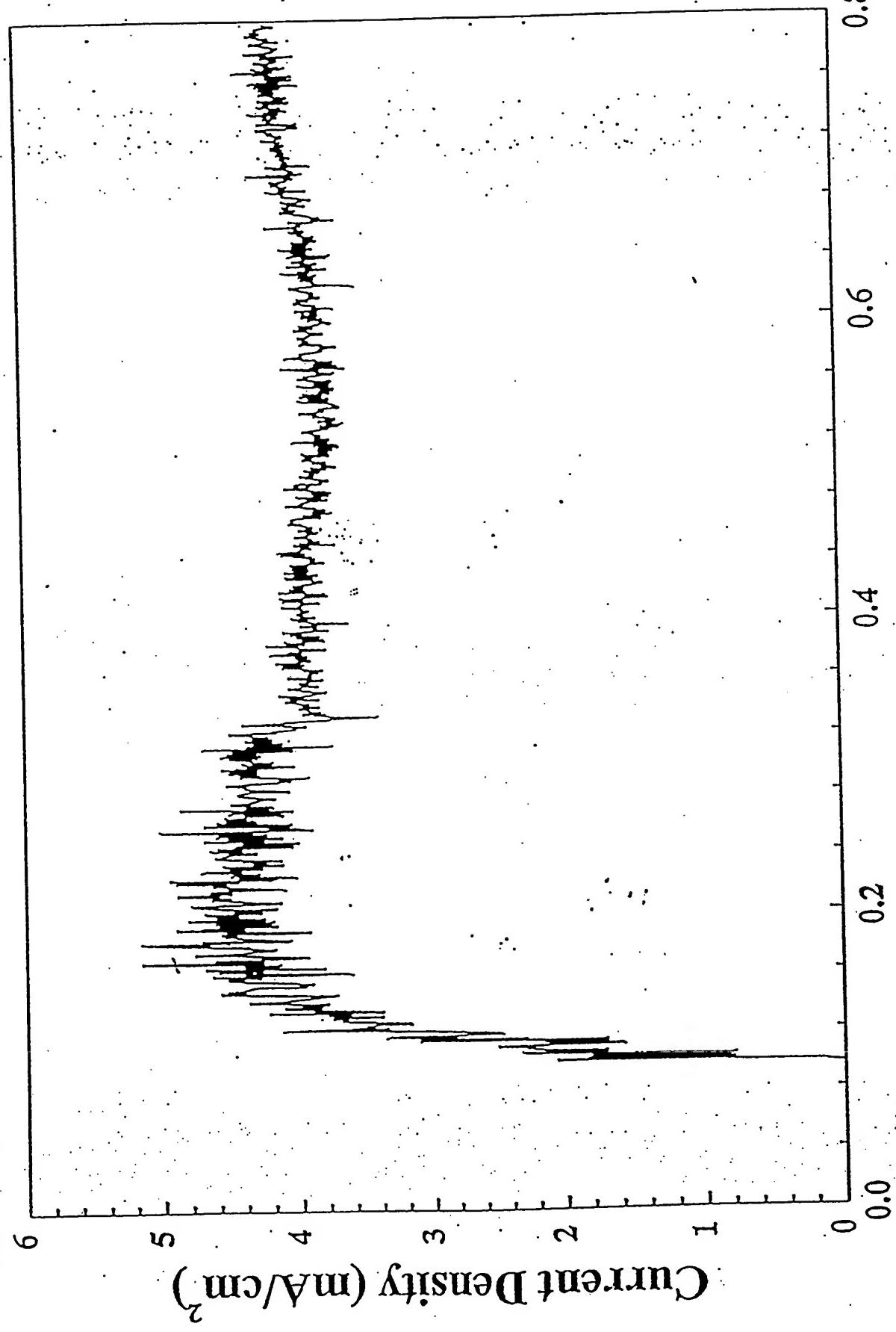


Fig. 5

Performance of MEA-A at 120 °C (anode: 3.4 stoich hydrogen  
at 90 °C; cathode: 4 stoich air at 83 °C)

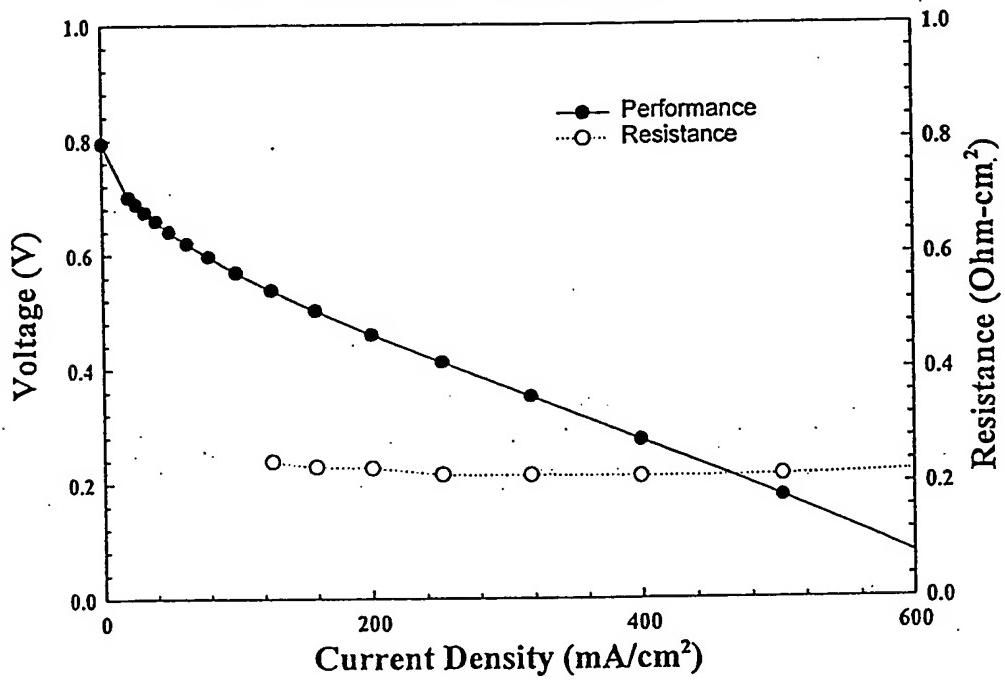


Fig. 6.

Performance of MEA-S at 120°C (anode: 3.4 stoich hydrogen  
at 90 °C; cathode: 4 stoich air at 84°C)

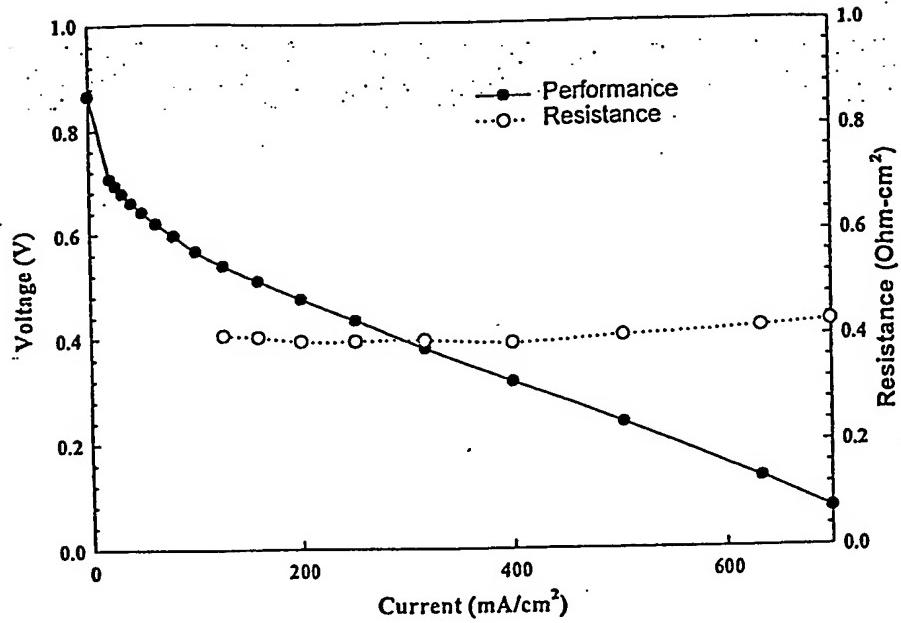


Fig. 7